Claims

1. A simulation system for computer-implemented simulation and verification of a control system under development, the simulation system comprising a host-target architecture, wherein an operating system of the target representing at least a part of the control system is reconfigured by the host via a application programming interface dedicated to the operating system of the target.

2. A simulation system according to claim 1, wherein the operating system is a real-time operating system.

3. A simulation system according to claim 2, wherein the operating system is reconfigured after downloading a executable software onto the target, so that the real-time behaviour of a software of the target is defined or altered.

4. A simulation system according to claim 1, wherein the application programming interface of the operating system is used.

5. A simulation system according to claim 1, wherein a second reconfigurable application programming interface is used instead of an application programming interface of the operating system.

6. A simulation system according to claim 1, wherein the host contains at least one modelling tool and on the target software of the control system is executed.

7. A simulation system according to claim 6, comprising a target server to connect the modelling tool with the target.

8. A simulation system according to claim 7, whereby the target server contains a protocol driver of a communication protocol used for communication with the target.

9. A simulation system according to claim 1, comprising a plurality of simulation processes with corresponding memory and interface modules, which modules comprise distinct memory locations for inter-module communication.

10. A simulation system according to claim 9, wherein simulation is performed by running a control system simulation model, the simulation model comprising a number of sub-models being performed on one of the plurality of modules, respectively.

11. A simulation system according to claim 9, wherein at least some of the modules are dynamically reconfigurable for communication via distinct memory locations.

12. A host of a simulation system for computer-implemented simulation and verification of a control system under development, the simulation system comprising a host-target architecture, wherein an operating system of the target representing at least a part of the control system is reconfigured by the host via a application programming interface dedicated to the operating system of the target.

13. A computer-implemented method for simulating and verifying a control system under development by means of a simulation system according to claim 1.

14. A computer program with program coding means which are suitable for carrying out a method according to claim 13, when the computer program is run on a computer.

15. A computer program product with a computer-readable medium and a computer program according to claim 13 stored on the computer-readable medium.